

**BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2021-1-E**

In the Matter of)
Annual Review of Base Rates for Decrease in)
Residential and Lighting Customer Fuel Costs)
and for Increase in General Service Non-Demand)
and General Service Demand Customer Fuel)
Costs for Duke Energy Progress, LLC)

**DIRECT TESTIMONY OF
JASON D. MARTIN FOR
DUKE ENERGY PROGRESS, LLC**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Jason D. Martin, and my business address is 40 West Broad Street, Suite 690,
3 Greenville, SC 29601.

4 **Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

5 A. I am Director of Strategy, Policy, and Strategic Investment for South Carolina at Duke
6 Energy Corporation (“Duke Energy”). I am responsible for the development and execution
7 of strategy and policy support related to distributed energy technology for Duke Energy’s
8 South Carolina retail franchises, including Duke Energy Progress, LLC (“DEP” or the
9 “Company”) and Duke Energy Carolinas, LLC (“DEC”). This includes evaluation of
10 legislation and regulation, and implementation of customer programs such as those
11 associated with Act 236, the South Carolina Distributed Energy Resource Act of 2014.

12 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
13 **WORK EXPERIENCE.**

14 A. I received a Bachelor of Science degree in Electrical and Computer Engineering at North
15 Carolina State University. I have been employed at Duke Energy since 1987 working in
16 the areas of Engineering, Customer Services, Large Account Management, and Distributed
17 Energy Technologies.

18 **Q. HAVE YOU TESTIFIED BEFORE THIS COMMISSION BEFORE?**

19 A. Yes. I testified before this Commission in DEC’s 2018, 2019, and 2020 fuel costs
20 proceedings in Docket Nos. 2018-3-E, 2019-3-E, and 2020-3-E, respectively, and in DEP’s
21 2019 and 2020 fuel costs proceedings in Docket No. 2019-1-E and 2020-1-E.

22

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2 A. The purpose of my testimony is to provide support for the Distributed Energy Resource
3 Program (“DERP”) costs that are incorporated into the proposed fuel factors prepared by
4 Witness Harrington. I will describe the nature of costs filed as well as any changes made
5 to the DERP portfolio since the 2020 fuel proceeding.

6 **Q. PLEASE DESCRIBE THE LEVELS OF SOLAR ADOPTION DEP HAS**
7 **EXPERIENCED THROUGH COMPLIANCE WITH ACT 236.**

8 A. Since January 1, 2015, DEP has seen significant growth in solar adoption as a result of
9 implementing the incentives and programs for compliance with Act 236 and the extension
10 of incentives through Act 62. The results of the implementation are shown below in Table
11 1. The Company has encouraged solar adoption through the Net Energy Metering
12 (“NEM”) incentive, Solar Rebate Program, and other DERP efforts discussed later in my
13 testimony. As of March 2020, the Company has met the renewable generation goals under
14 Act 236.

15 **Table 1: DEP Solar Adoption by Implementing Act 236, as of March 1, 2021¹**

| | | ACT 236 Goal | Capacity Installed | % of Goal |
|---------|--|--------------|--------------------|-----------|
| Tier I | Utility Scale Solar (1MW – 10MW) | 13 | 15 | 115% |
| Tier II | Customer Scale Solar (<1MW) ² | 13 | 7.7 | 1283% |
| | Small Scale Solar (<20kW) | 3 | 12.4 | 413% |

Notes

1. All values in MW-AC

2. Customer Scale Solar Goal is inclusive of Small Scale Solar Goal

16

17

1 **Q. PLEASE DESCRIBE THE DERP COSTS THAT ARE INCLUDED IN THE**
2 **REVIEW, ESTIMATED, AND BILLING PERIODS.**

3 A. Pursuant to Commission Order No. 2015-515, the Company offers its customers a variety
4 of programs to support solar development. As a result, the Company incurred DERP
5 incremental and avoided costs totaling \$4,444,255 in the period from March 1, 2020
6 through February 28, 2021 (the “review period”); anticipates incurring \$1,853,685 during
7 the period March 1, 2021 through June 30, 2021 (the “estimated period”); and projects to
8 incur \$5,408,406 in the period July 1, 2021 through June 30, 2022 (the “billing period”).

9 These costs represent the avoided and incremental costs associated with the
10 Company’s approved DERP offerings, including 1) Purchased Power Agreements
11 executed to fulfill the Company’s utility-scale solar goals under Act 236; 2) Distributed
12 Energy Resource (“DER”) NEM Incentive; 3) Solar Rebate Program; 4) Carrying Costs on
13 Deferred Solar Rebate Amounts; 5) Shared Solar Program; 6) NEM Avoided Capacity
14 Costs; 7) NEM Meter Costs; and 8) General and Administrative Expenses, including
15 incremental labor costs as a direct result of DERP, IT and billing enhancements, and other
16 administrative costs associated with delivering these new programs to customers. Table 2
17 is an itemization of actual and expected DERP costs.

18

1 **Table 2: DEP DERP Cost Summary - Review, Estimated, and Billing Periods**

| Cost Type | Review Period | Forecast Period | Billing Period |
|---|----------------|-----------------|----------------|
| | 3/1/20-2/28/21 | 3/1/21-6/30/21 | 7/1/21-6/30/22 |
| DERP Incremental Costs | | | |
| Purchased Power Agreements | \$ 44,435 | \$ 13,956 | \$ 34,523 |
| DER NEM Incentive | 1,674,325 | 710,088 | 2,303,298 |
| Solar Rebate Program - Amortization | 587,885 | 206,052 | 657,479 |
| Solar Rebate Program - Carrying Costs | 483,009 | 159,880 | 491,637 |
| Shared Solar Program | 57,591 | 16,650 | 44,745 |
| NEM Avoided Capacity Costs | 18,454 | 1,883 | 6,285 |
| NEM Meter Costs | 125,799 | 46,024 | 143,917 |
| General and Administrative Expenses | 301,384 | 127,577 | 358,001 |
| Interest on under-collection due to cap | 314 | 119 | 530 |
| Total DER Incremental Costs | \$ 3,293,196 | \$ 1,282,229 | \$ 4,040,415 |
| | | | |
| DERP System Avoided Cost - Energy & Capacity | | | |
| Purchased Power Agreements | \$ 1,066,069 | \$ 448,029 | \$ 1,268,827 |
| Shared Solar Program | 84,990 | 34,340 | 99,164 |
| Total DERP Avoided Costs | \$ 1,151,059 | \$ 482,369 | \$ 1,367,991 |
| | | | |
| Total Incremental and Avoided Cost | \$ 4,444,255 | \$ 1,764,598 | \$ 5,408,406 |

Sources

Incremental Costs: Harrington Exhibit 9 & 11

Avoided Costs: Harrington Exhibit 13 & 14

2 **Q. PLEASE DESCRIBE THE COMPANY'S DER NEM INCENTIVE AND COSTS.**

3 A. The DER NEM Incentive is a credit available to eligible net energy metering customer-
4 generators that enables the customer-generator to receive full retail rate compensation for
5 each kilowatt-hour (kWh) generated by their solar facility.

6 The DER NEM Incentive approximates the difference between (a) the value of a
7 NEM Distributed Energy Resource, as computed using the methodology approved in
8 Docket No. 2014-246-E, and (b) the utility's retail rate for that customer. Settling Parties
9 in Docket No. 2014-246-E agreed that the DER NEM Incentive shall be treated as an
10 incremental cost, as defined in S.C. Code Ann. § 58-39-140, effectively socializing the cost

1 of the DER NEM Incentive to all retail customers as a component of the utilities' respective
 2 DER programs. Act 62 removed the statutory capacity cap on NEM as set forth in Act 236
 3 and made NEM available to all customer-generators who apply before June 1, 2021, according
 4 to all the terms and conditions provided to all parties in Commission Order No. 2015-194.

5 As shown on the "DER NEM Incentive" line in Table 2 above, the total costs
 6 associated with this incentive are expected to grow significantly in the Billing Period. This
 7 growth is related to an expected increase in customers who have elected service under
 8 Rider RNM due to the availability of the Solar Rebate Program and the NEM incentive,
 9 discussed below.

10 **Q. PLEASE DESCRIBE THE GROWTH OF CUSTOMER PARTICIPATION IN NET**
 11 **ENERGY METERING.**

12 A. Participation in net energy metering has increased significantly since 2015 as a result of the
 13 decrease in the acquisition costs of solar, in addition to the availability of the Company's Solar
 14 Rebate Program and the NEM Incentive. On May 16, 2019, Act 62 was signed into law, which
 15 removed the 2% NEM capacity limit and extended provisions of NEM pursuant to Order No.
 16 2015-194, requiring the Company make NEM available to all customer-generators who apply
 17 after May 16, 2019 and before June 1, 2021. Table 3 details total NEM participation as of
 18 February 28, 2021.

19 **Table 3: DEP Net Energy Metering – Total Participation**

| Rider RNM | As of 2/28/2021 | |
|---------------------------------|------------------------|---------------------|
| | Number of Applications | Capacity in MW (AC) |
| Applications Approved | 1,780 | 21.63 |
| Applications Withdrawn | 18 | 0.17 |
| In Process and Installed | 1,762 | 21.46 |
| Installed | 1,595 | 19.83 |
| In Process | 167 | 1.64 |

1 **Q. PLEASE DESCRIBE THE GROWTH OF THE DER NEM INCENTIVE.**

2 A. The growth of the DER NEM Incentive is attributed to an increase in interconnected,
3 operational facilities participating in net metering during the review, estimated, and billing
4 periods. Table 4, below, depicts the number of customers (and the associated kilowatts
5 (kW-AC)) who have or are expected to energize their solar facilities and participate in net
6 metering.

7 **Table 4: DEP Net Energy Metering Capacity Connected - Review, Estimated, and**
8 **Billing¹**

| Rider RNM and Rider NM-SC | Review Period | Estimated Period | Billing Period |
|------------------------------|----------------|------------------|----------------|
| | 3/1/20-2/28/21 | 3/1/21-6/30/21 | 7/1/21-6/30/22 |
| Capacity (kW-AC) | 20,097 | 21,443 | 22,835 |
| # of Customers | 1,620 | 1,734 | 1,859 |

Notes:

1. These values represent cumulative capacity and number of customers on the last day of each period.
2. Capacity presented as nameplate

9

10 **Q. COMMISSION ORDER 2015-194 REQUIRES THAT THE VALUE OF NEM**
11 **DISTRIBUTED ENERGY RESOURCES IS COMPUTED ANNUALLY. WHAT IS**
12 **THE 2021 VALUE AND HOW DID YOU ARRIVE AT THAT NUMBER?**

13 A. Through applying the avoided cost methodology and rates recently approved by the
14 Commission in Order Nos. 2019-881(A) and 2020-315(A) (issued on January 2, 2020 and
15 April 17, 2020, respectively), as well as updated input assumptions, the Company has updated
16 the 2021 value of NEM Distributed Energy Resources to \$0.02446 per kWh for Schedules RES
17 and R-TOUD, \$0.02444 for Schedule SGS, and \$0.02448 for all other schedules. Table 5,
18 below, lists the components used to determine the value of NEM Distributed Energy Resources

1 and their value. The calculation is consistent with the methodology approved in Order No.
 2 2015-194. The methodology includes all categories of potential benefits or costs to the utility
 3 system that are capable of quantification or possible quantification in the future.

4 **Table 5: Value of NEM Distributed Energy Resource, by Component**

| Components of NEM Distributed Energy Resource Value | Component Value (\$/kWh) Residential PV ¹ | Component Value (\$/kWh) SGS PV ¹ | Component Value (\$/kWh) Large PV ¹ |
|---|--|--|--|
| Marginal Energy Cost | \$0.024785 | \$0.024795 | \$0.024801 |
| Marginal Capacity Cost | \$0.001767 | \$0.001738 | \$0.001763 |
| Ancillary Services | (\$0.002389) | (\$0.002390) | (\$0.002390) |
| Transmission and Distribution ("T&D") Capacity | \$0.000000 | \$0.000000 | \$0.000000 |
| Avoided Criteria Pollutants ² | \$0.000027 | \$0.000028 | \$0.000030 |
| Avoided CO2 Emission Cost (currently zero) | \$0.000000 | \$0.000000 | \$0.000000 |
| Fuel Hedge ³ | \$0.000000 | \$0.000000 | \$0.000000 |
| Utility Integration & Interconnection Costs | \$0.000000 | \$0.000000 | \$0.000000 |
| Utility Administration Costs | \$0.000000 | \$0.000000 | \$0.000000 |
| Environmental Costs | \$0.000000 | \$0.000000 | \$0.000000 |
| Subtotal | \$0.024190 | \$0.024170 | \$0.024204 |
| Line Losses ⁴ | \$0.000272 | \$0.000271 | \$0.000271 |
| Total Value NEM Distributed Energy Resource | \$0.024461 | \$0.024442 | \$0.024475 |

1 "Residential PV" refers to a load shape reflecting generation installed by a residential customer. "SGS PV" refers to a load shape reflecting generation installed by a small commercial/industrial customer served under Small General Service Schedule SGS. "Large PV" refers to a load shape reflecting generation installed by a customer with higher consumption requirements and applies to all other nonresidential schedules. For the first time, the Company has separated the values for residential customers ("Residential PV") and small commercial/industrial customers ("SGS PV") as a result of available actual metered solar load profile data for the residential class. The Company continues to utilize third-party solar load profile data for non-residential customers.

2 Avoided Criteria Pollutants reflects NOx and SOx that have been separately identified from approved marginal energy costs.

3 Pursuant to the Settlement Agreement reached in DEP's 2016 annual fuel proceeding (Docket No. 2016-3-E), the Company has calculated the hedge value and determined that no fuel hedge exists; therefore, the value is zero.

4 Line loss factors are 1.281% for marginal energy and 1.857% for marginal capacity per DEP's updated 2018 line loss analysis based upon 2020 cost of service.

5
 6 **Q. PLEASE EXPLAIN WHY SOME OF THE COMPONENTS ARE VALUED AT**
 7 **ZERO.**

8 **A.** The Company has identified the benefits or costs of several of the components of the Value
 9 of NEM DER as zero either because insufficient data and analysis exists to quantify the

1 cost or benefit of that component or because the Company believes the actual numerical
2 value of that component is zero.

3 **Q. DOES DEP ROUTINELY REVIEW THE COST AND BENEFIT COMPONENTS**
4 **OF THE VALUE OF NEM OF DER CALCULATION?**

5 A. Yes. As stated earlier, the Company has updated the Value of NEM DER calculation based
6 on the recently-approved avoided cost methodology and avoided cost rates. Additionally,
7 as the amount of installed customer-owned generation increases, it is important that the
8 Company continually monitors its impact to ensure safe and reliable grid operations.
9 Through this monitoring and analysis of the impact of NEM DER on the Company's
10 system, new costs and benefits are identified. Those identified costs and benefits of NEM
11 DER are then incorporated into the the Value of NEM DER calculation in the next year's
12 fuel case.

13 **Q. PLEASE DESCRIBE EXHIBIT 1 TO YOUR TESTIMONY.**

14 A. Martin Exhibit 1 provides a redline of the Company's proposed 2021 net metering rider,
15 Rider RNM, illustrating changes from the previous tariff. The only substantive change to
16 the tariff is the updated value of NEM Distributed Energy Resources.

17 **Q. PLEASE DESCRIBE THE STATUS OF THE COMPANY'S SOLAR REBATE**
18 **PROGRAM.**

19 A. The Company's solar rebate program was implemented to assist the Company in meeting
20 its Customer Scale solar requirement (facilities 1,000 kW and less) under Act 236. The
21 Company has made available two solar rebate programs for its customers: the Small Solar
22 Rebate Program and the Large Solar Rebate Program. Both provide a qualified customer
23 with a rebate of \$1.00 per watt-dc, and \$1.50 per watt-dc for non-profit organizations, upon

1 successful energization of a solar facility that conforms to the sizing requirements outlined
 2 in Act 236. As shown in Table 6, below, interest in the solar rebate, as measured by solar
 3 rebate applications received, has exceeded available capacity per Act 236 goals.

4 **Table 6: DEP Solar Rebate Program Capacity Status, as of March 1, 2021**

| Solar Facility Size | ACT 236 Goal | Rebate Applications Received | Rebate Applications Accepted | Rebate Applications Paid |
|-----------------------------------|-------------------|------------------------------|------------------------------|--------------------------|
| "Small" - Up to 20kW-AC | At least 3,250 kW | 4,075 kW | 3,885 kW | 96% |
| "Large" - 20.01kW-AC - 1,000kW-AC | 9,750 kW | 12,250 kW | 9,150 kW | |
| Total | 13,000 kW | 16,325 kW | 13,000 kW | |

5 *All Values in kW-AC

6 As a result of receiving applications in excess of available capacity, the Company created
 7 a waiting list for customers to be utilized as additional capacity becomes available due to
 8 a project withdrawing or no longer meeting the criteria to receive a rebate.

9 **Q. PLEASE DESCRIBE THE DERP COSTS ASSOCIATED WITH THE**
 10 **COMPANY'S SOLAR REBATE PROGRAM.**

11 A. The incremental costs associated with the Solar Rebate Program and included in this filing
 12 are the amortization of rebates paid, carrying costs on deferred amounts, and general and
 13 administrative expenses required to manage the program, as shown in Table 2. These
 14 values in Table 2 reflect rebate amortization amounts and carrying cost amounts which
 15 have been adjusted as prescribed in Order No. 2019-341.

16 **Q. PLEASE PROVIDE AN OVERVIEW AND STATUS OF THE COMPANY'S**
 17 **SHARED SOLAR PROGRAM.**

18 A. The Company's Shared Solar Program, which launched in July 2018, is a means for retail
 19 customers to subscribe to and share in the economic benefits of one renewable energy

1 facility. Customers are able to apply to the program using an online application which
 2 shows real-time capacity available in the program and assists them in determining their
 3 appropriate subscription size. Once enrolled, in addition to their regular energy bill,
 4 participants also pay a monthly shared solar subscription fee. That fee funds their share of
 5 supporting a centrally-located solar energy facility. In exchange, they receive a monthly
 6 energy credit from the Company equal to the amount of solar energy produced by their
 7 share of the solar facility. In order to increase accessibility to the program, DEP also offers
 8 a low-moderate income (“LMI”) customer program, through which DEP will waive the
 9 application fee and initial subscription charge (a \$120 value) for 200 LMI qualified
 10 customers.

11 The Company dedicated 1,000 kW of a Purchased Power Agreement (entered into
 12 pursuant to the utility-scale goals of Act 236) to the Shared Solar Program. Table 7 below,
 13 provides participation details for the program.

14 **Table 7: DEP Shared Solar Program Status, as of March 1, 2021**

| Program Type | Total Available Capacity (kW-AC) | Number of Customers Subscribed | Total kW-AC Subscribed | % Subscribed |
|---------------------------|----------------------------------|--------------------------------|------------------------|--------------|
| Standard Offering | 600 | 82 | 600 | 100% |
| Low-Moderate Income (LMI) | 400 | 200 | 400 | 100% |

15 **Q. WHAT IS THE CURRENT STATUS OF THE SHARED SOLAR PROGRAM**
 16 **UNDER ACT 236?**

17 A. The Company has fully subscribed the Shared Solar program implemented under Act 236.
 18 The program adoption by customers was completed with filling the Low-Moderate Income

1 portion of the program by implementing the changes approved by the PSC to provide more
2 opportunity to LMI customers. For the LMI customers, a waiting list has been established
3 in the event capacity becomes available within the LMI designated capacity. The outreach
4 to all customers through various methods proved beneficial in promoting the program and
5 soliciting participating customers.

6 **Q. PLEASE DESCRIBE THE DERP COSTS ASSOCIATED WITH THE**
7 **COMPANY'S SHARED SOLAR PROGRAM.**

8 A. The cost associated with the Shared Solar Program, as set forth in Table 2 include the
9 following incremental cost components: the amount of subsidy utilized to lower
10 subscription fees for the program, general and administrative costs of the program, and
11 costs of Shared Solar purchased power agreements in excess of avoided cost. Table 2 also
12 includes the following avoided costs: avoided cost amounts paid for the purchase of power
13 from participants in the program.

14 **Q. PLEASE DESCRIBE THE RESULTS OF THE COMPANY'S REQUEST FOR**
15 **PROPOSALS OF UTILITY-SCALE SOLAR FACILITIES AND THE**
16 **ASSOCIATED DERP COSTS.**

17 A. The Company has executed two PPAs totaling 15,000 kW (AC), with 1,000 kW dedicated
18 to the Shared Solar Program. The first facility became operational in December 2017 and
19 the second facility became operational in March 2020. Table 2 sets forth the incremental
20 and avoided costs associated with these PPAs.

21 **Q. PLEASE DESCRIBE THE COMPANY'S EFFORTS TO COMMUNICATE WITH**
22 **STAKEHOLDERS ABOUT DER PROGRAMS AND PROGRAM CHANGES IN**
23 **THE PAST YEAR.**

1 A. Since the Commission approved the Company's DER Program application in 2015, the
2 Company has utilized various communication and outreach tools to ensure that solar
3 stakeholders and retail customers have access to information about the Company's
4 programs and are able to communicate with representatives from the Company about the
5 programs. For example, the Company has: 1) conducted quarterly DER Collaborative
6 meetings with a diverse group of stakeholders representing the environmental community,
7 low income community, solar installers, solar developers, and regulators; 2) provided a
8 summary of net metering adoption on the Duke Energy website; 3) held a number of events
9 and marketing campaigns for the Shared Solar Program (see additional detail above); and
10 4) provided call center support to retail customers and solar installers via its Renewable
11 Service Center, which is staffed with approximately twenty professionals. The Company
12 uses these outreach efforts as well as regular communication to keep stakeholders and retail
13 customers informed of the status of the program offerings and other developments related
14 to its DER programs.

15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

16 A. Yes.

RENEWABLE NET METERING RIDER RNM-10.9

AVAILABILITY

Available to residential and nonresidential Customers receiving concurrent service from Company, on a metered rate schedule, except as indicated under General Provisions. A customer-generator is a owner, operator, or lessee of an electric generation unit that generates or discharges electricity from a renewable energy resource, including an energy storage device configured to receive electrical charge solely from an onsite renewable energy resource. The renewable net energy metered (NEM) generation, which includes a solar photovoltaic; solar thermal; wind powered; hydroelectric; geothermal; tidal or wave energy; recycling resource; hydrogen fueled or combined heat and power derived from renewable resources; or biomass fueled generation source of energy, is installed on Customer's side of the delivery point, for Customer's own use, interconnected with and operated in parallel with Company's system. The generation must be located at a single premises owned, operated, leased or otherwise controlled by Customer.

Service under this Rider is closed to new participants on and after June 1, 2021. Participants served under this Rider prior to May 16, 2019, and subsequent owners of the customer-generator facility, shall remain eligible for service under this Rider until December 31, 2025, when an alternate tariff must be selected. Participants and subsequent owners of the customer-generator facility applying for service under this Rider on and after May 16, 2019 and prior to June 1, 2021 shall remain eligible for service under this Rider until May 31, 2029, when an alternate tariff must be selected. Customers requesting NEM service on and after June 1, 2021, will receive service in accordance with the NEM tariff in effect at that time.

GENERAL PROVISIONS

1. To qualify for service under this Rider, Customer must comply with all applicable interconnection standards and must provide, in writing, the Nameplate Capacity of Customer's installed renewable generation system. Any subsequent change to the Nameplate Capacity must be provided by Customer to Company in writing by no later than 60 days following the change.
2. To qualify for service under this Rider, a residential customer may be served on an approved residential rate schedule, but may not be served under Rider NM. The Nameplate Capacity of Customer's installed generation system and equipment must not exceed 20 kW AC.
3. To qualify for service under this Rider, a nonresidential customer may be served on an approved general service rate schedule, but may not be served on Schedules SGS-TES, TSS, TFS, LGS-RTP, LGS-CUR-TOU, CSG, CSE, GS, SFLS, SGS-TOU-CLR or Rider NM. The Nameplate Capacity of Customer's installed renewable generation system and equipment must not exceed 1,000 kW AC or 100% of Customer's contract demand which shall approximate Customer's maximum expected demand.
4. If Customer is not the owner of the premises receiving electric service from Company, Company shall have the right to require that the owner of the premises give satisfactory written approval of Customer's request for service under this Rider.
5. All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags", associated with the generation system shall be conveyed to Company until billing of a Distributed Energy Resource Program Rider DERP Charge is discontinued on all customer bills. Customer certifies that the environmental attributes have not and will not be remarketed or otherwise resold for any purpose, including another distributed energy

- resource standard or voluntary purchase of renewable energy certificates in South Carolina or in any other state or country for the Contract Period and any successive contract periods thereto.
6. If the electricity supplied to Customer by Company exceeds the electricity delivered to the grid by the customer-generator during a monthly billing period, the customer-generator shall be billed for the net electricity in kilowatt hours (kWh) supplied by Company plus any demand or other charges under the applicable rate schedule or riders.
 7. Electricity delivered to the grid by Customer's renewable generation that exceeds the electricity delivered by Company during a monthly billing period is defined as Excess Energy. When used in conjunction with a time of use schedule, the TOU periods shall be specified in the applicable schedule and any Excess Energy shall apply first with the Excess Energy generated On-Peak kWh offsetting On-peak usage and then offsetting Off-peak usage. Any excess Off-Peak kWh shall only apply against Off-peak kWh usage. Any Excess Energy not used in the current month to offset usage shall carry forward to the next billing month.
 8. Excess Energy shall be used to reduce electricity delivered and billed by Company during the current or a future month, except that for the March billing period any carry-over shall be compensated as described in the RATE paragraph below. In the event Company determines that it is necessary to increase the capacity of facilities beyond those required to serve Customer's electrical requirement or to install a dedicated transformer or other equipment to protect the safety and adequacy of electric service provided to other customers, Customer shall pay the estimated cost of the required transformer or other equipment above the estimated cost which Company would otherwise have normally incurred to serve Customer's electrical requirement, in advance of receiving service under this Rider.
 9. The rates set forth herein are subject to Commission Order No. 2015-194, issued in Docket No. 2014-246-E pursuant to the terms of S.C. Code § 58-40-20(F)(4). Eligibility for this rate will terminate as set forth in that Order, and otherwise as specified above. The value of NEM generation eligible for this Rider shall be computed using the methodology contained in Commission Order No. 2015-194, in Docket No. 2014-246-E, and shall be updated annually by Company. The value of NEM generation for 2020 is ~~\$0.024460.02445~~ per kWh for Schedules RES and R-TOUD, ~~\$0.024440.02443~~ for Schedule SGS and ~~\$0.024480.02446~~ for all other schedules.

RATE

All provisions of the applicable schedule and other applicable riders will apply to service supplied under this Rider, except as modified herein. For any bill month during which the Energy Charges are a net credit, the respective Energy Charges for the month shall be zero. Credits shall not offset the Basic Facilities Charge or the Demand Charge (if applicable). In addition to all charges in the applicable rate schedule for Customer's net electrical usage, the following credit may be applicable annually:

Annual Credit for Excess Generation –

If Customer has Excess Energy after offsetting usage as of the date of the March billing, Company shall pay Customer for the amount of the accumulated Excess Energy times a rate of \$0.03360 per kWh, after which the amount of Excess Energy shall be set to zero.

MINIMUM BILL

The monthly minimum bill for customers receiving service under this Rider shall be no less than Basic Facilities Charge from the applicable rate schedule and riders plus, if applicable, any of the following Charges: the Demand Charge, the Off-peak Excess Demand Charge, and the Extra Facilities Charge.

METERING REQUIREMENTS

Company will furnish, install, own and maintain a billing meter to measure the kilowatt demand delivered by Company to Customer, and to measure the net kWh purchased by Customer or delivered to Company. For renewable generation capacity of 20 kW AC or less, the billing meter will be a single, bi-directional meter which records independently the net flow of electricity in each direction through the meter, unless Customer's overall electrical requirement merits a different meter. For larger renewable generation capacities, Company may elect to require two meters with 15-minute interval capabilities to separately record Customer's electrical consumption and the total generator output, which will be electronically netted for billing. Customer grants Company the right to install, operate, and monitor special equipment to measure Customer's generating system output, or any part thereof, and to obtain any other data necessary to determine the operating characteristics and effects of the installation. All metering shall be at a location that is readily accessible by Company.

SAFETY, INTERCONNECTION AND INSPECTION REQUIREMENTS

This Rider is only applicable for installed renewable generation systems and equipment that complies with and meets all safety, performance, interconnection, and reliability standards established by the Commission, the National Electric Code, the National Electrical Safety Code, the Institute of Electrical and Electronic Engineers, Underwriter's Laboratories, the Federal Energy Regulatory Commission and any local governing authorities. Customer must comply with all liability insurance requirements of the Interconnection Standard.

POWER FACTOR

Customer's renewable generation must be operated to maintain a 100% power factor, unless otherwise specified by Company. When the average monthly power factor of the power supplied by Customer to Company is other than 100%, the Low Power Factor Adjustment stated in Company's Service Regulations may be applicable. Company reserves the right to install facilities necessary for the measurement of power factor. Company will not install such equipment, nor charge a Low Power Factor Adjustment if the renewable generation system is less than 20 kW AC and uses an inverter.

CONTRACT PERIOD

Customer shall enter into a contract for service under this Rider for a minimum original term of one (1) year, and shall automatically renew thereafter, except that either party may terminate the contract after one year by giving at least sixty (60) days prior notice of such termination in writing.

Company reserves the right to terminate Customer's contract under this Rider at any time upon written notice to Customer in the event that Customer violates any of the terms or conditions of this Rider, or operates the renewable generation system and equipment in a manner which is detrimental to Company or any of its customers. In the event of early termination of a contract under this Rider, Customer will be required to pay Company for the costs due to such early termination, in accordance with Company's South Carolina Service Regulations.